



**VEHICLE FACTORS GROUP CHAIRMAN'S
FACTUAL REPORT**

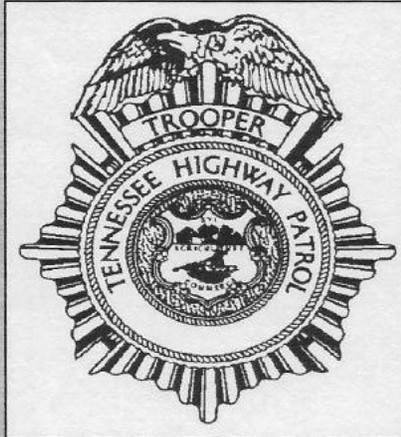
**Vehicle Attachment - Tennessee Highway Patrol Commercial Vehicle Post-Crash
Investigation Report**

Chattanooga, Tennessee

HWY17MH009

(14 pages)

TENNESSEE HIGHWAY PATROL COMMERCIAL VEHICLE POST-CRASH INVESTIGATION REPORT



TENNESSEE HIGHWAY PATROL
INCIDENT / EVENT TRACKING NUMBER
216041261

CRASH DATE AND LOCATION

11/21/2016 Talley Rd, Chattanooga, Tn.

REPORT COMPLETED BY

Trp. Wade Clepper

DATE

November 23, 2016

POST-CRASH INSPECTION REPORT REVIEW

THP Incident / Event No.	216041261	Driver/Vehicle Examination Report No.	Zonar/ Had been checked
Investigating Officer	Trp. Wade Clepper		
Officer Assisting (If applicable)	Sgt. John MacFarland/Trp. Chuck Melhorn/Sgt. Alan Bailey		
District Office	Chattanooga		
Date and Time Officer Notified	11/20/2016		
Location	Yates Wrecker Service [REDACTED]		
Date and Time Inspection Began	11/22/2016 0800 Hrs		
Date Inspection Completed	11/22/2016 1800 Hrs		
Total Manhours	40	Overtime Hours	
Compliance Review Requested (Y/N)	N	To Whom?	
Photographs Taken (Y/N)	Y	By Whom?	CPD/THP
Number of Photographs Taken	Unknown		
Person Receiving Photographs	CPD		
Date of Delivery	N/A	Time of Delivery	N/A

REVIEWERS

Reviewing Post-Crash Officer

Printed Name	Signature	Date

Immediate Supervisor

Printed Name	Signature	Date

Field Office Commander

Printed Name	Signature	Date

POST-CRASH INSPECTION SUMMARY (Page 2a)

The 2008 Thomas bus was taken from the scene of the crash by Yates Wrecker Service to their yard on 23rd St. The bus was placed inside the building and removed from the trailer.

A walk around inspection was completed and photos were taken. No violations were noted.

Air was supplied to the bus via connection to the main service air line that had been disconnected from the rear of the air compressor. The system was charged with air.

There were no leaks detected. The braking system was intact and able to be inspected by using the foot brake.

There were no violations noted with the braking system.

The Steering system was complete and no Violation were noted during the inspection.

We were unable to get power to the bus as a result the lights and other electrical componets were not inspected.

All indication show the the seat frames and bottoms were secure at the time of the crash. Some had been removed at the scene.

The tires were all inflated at the time of inspection and had an acceptable tread depth.

The wheels were inspected and no violations were noted.

The frame was intact and had sustained damage from the crash. Cross members and connection point were intact. No violations noted.

The suspension was inspected. No violations noted.

Roof Hatches were operable at the time of the crash and were used during the evacuation after the crash. Their were the required number of Emeregency Window Exits installed on the bus. No violation found with Emergency windows.

The rear Emergency Exit was operable at the time of the crash and was used during the evacuation after the crash.

LEAD AGENCY INFORMATION

Requesting Agency	Chattanooga Police Department		
Address		Phone No.	
Investigating Trooper/Officer	Ofc. Cavet	Phone No.	
Requesting Agency Tracking #		Photographs Taken?	Yes

OTHER OFFICIALS PRESENT

Official's Name and Title	Jerome Cantrell	Reason for Presence	Post Crash Inspectio
Agency	NTSB	Phone No.	[REDACTED]
Address			
Official's Name and Title		Reason for Presence	
Agency		Phone No.	
Address			
Official's Name and Title		Reason for Presence	
Agency		Phone No.	
Address			
Official's Name and Title		Reason for Presence	
Agency		Phone No.	
Address			
Official's Name and Title		Reason for Presence	
Agency		Phone No.	
Address			

WITNESS INFORMATION

Name		License No./State	
Address			
Phone Number		Cell/Pager Number	
Employer/Occupation		Work Number	
Name		License No./State	
Address			
Phone Number		Cell/Pager Number	
Employer/Occupation		Work Number	
Name		License No./State	
Address			
Phone Number		Cell/Pager Number	
Employer/Occupation		Work Number	
Name		License No./State	
Address			
Phone Number		Cell/Pager Number	
Employer/Occupation		Work Number	
Name		License No./State	
Address			
Phone Number		Cell/Pager Number	
Employer/Occupation		Work Number	

MOTOR CARRIER INFORMATION

Name of Motor Carrier		Durham School Services LP			
Street Address		7273 State Rd 76			
City	Nechan	State	Wi	Zip	54956
DOT No.		ICC No.			
Phone Number		Fax Number			
Representative Contacted		Position/Title	General Mander		
Type of Transportation Being Performed (ie Interstate For-Hire)		Intra State For Hire			

INSURANCE INFORMATION

Company		Old Republic Insurance Company			
Street Address		P O BX 305191			
City	Nashville	State	Tn	Zip	37230-519
Representative on Scene		UNK			
Policy Number		Effective Date on Policy	11/1/2016		

INSPECTION SELECTION SYSTEM

Inspection Value				Total Number of Inspections			
Crash SEA		Vehicle SEA		Driver SEA			
Vehicle Out-of-Service Rate				Driver Out-of-Service Rate			
Hazardous Materials				Yes		No	

CARGO INFORMATION

Description	Passengers	Manifest Number					
Shipper							
Address							
City/State/Zip Code				Phone Number			
Receiver							
Address							
City/State/Zip Code				Phone Number			
Weight by Manifest	Shipped Date				Delivery Date		
Hazardous Materials	YES	<input checked="" type="checkbox"/>	NO	(If YES, see pages 15-16)			
Hazardous Materials Spilled?	YES	<input checked="" type="checkbox"/>	NO				
TEMA Notified?	YES	<input checked="" type="checkbox"/>	NO				
Clean-up Performed By							
Address/City/State/Zip Code							
Phone Number				Representative Name			

Additional Comments

This was a School Bus that had picked up Passengers from Woodmore Elementary School and was taking the passengers from school to their residences.

DRIVER INFORMATION

	DRIVER INFORMATION	CO-DRIVER INFORMATION
Name	[REDACTED]	
Address	[REDACTED]	
City/State/Zip Code	[REDACTED]	
Home Phone	[REDACTED]	
DOB	[REDACTED]	
Driver License Number/State	[REDACTED]	
Class	DB	
Endorsements	PS	
Restrictions/Complied with?	UNK	
Years Driving Experience	4.5 months	
Knowledge of Roadway	Well Known	
Driver History	None	
Previous Crashes	[REDACTED]	

MEDICAL CERTIFICATE

	DRIVER INFORMATION	CO-DRIVER INFORMATION
Date of Examination	[REDACTED]	
Date of Expiration	[REDACTED]	
Lenses	YES	
Hearing Aid	N/A	
Waiver	N/A	
Medic Alert	N/A	
Examining Doctor	TRACY G. GARDNER NP	
Clinic	PHYSICIANS CARE	
Clinic Address	[REDACTED] CHATTANOOC	
Seat Belt Type	SHOULDER/LAP	

DRIVER'S HOURS OF SERVICE

Date	Driving	On-Duty	TOTAL	Miles Driven	Hours Accumulated 60/70 Hour Rule	
					Hours Accumulates Since Last Legal Break	
					Last Entry in Duty Status	
					Driver in Violation of Hours of Service?	
CO-DRIVER						
					Duty Status at Time of Crash	
					Last Entry in Duty Status	
					Hours Accumulated 60/70 Hour Rule	
					Hours of Service Violations Noted?	
Electronic Duty Status (Y/N)				Model		Serial Number
Information Downloaded By					Unit Seized By	

PASSENGER INFORMATION

Name		Race/Sex		DOB	
Street Address		Phone Number			
City/State/Zip Code		Identification Number		Authorized?	
Name		Race/Sex		DOB	
Street Address		Phone Number			
City/State/Zip Code		Identification Number		Authorized?	
Name		Race/Sex		DOB	
Street Address		Phone Number			
City/State/Zip Code		Identification Number		Authorized?	

TIRE INFORMATION

	Driver Side				Passenger Side			
Axle 1								
Size	11R22.5				11R22.5			
Make	BRIDGESTONE				BRIDGESTONE			
Design	R268				R268			
Pressure	95				110			
Tread Depth	Max	Min	Max	Min	Max	Min	Max	Min
	10/32	9/32	10/32	9/32	10/32	9/32	10/32	9/32
Axle 2	Outside		Inside		Inside		Outside	
Size	11R22.5		11R22.5		11R22.5		11R22.5	
Make	BRIDGESTONE		GOODYEAR		BRIDGESTONE		MICHELIN	
Design	R268		C149		R260		XZE	
Pressure	94		76		80		58	
Tread Depth	Max	Min	Max	Min	Max	Min	Max	Min
	24/32	19/32	21/32	19/32	8/32	7/32	20/32	16/32
Axle 3	Outside		Inside		Inside		Outside	
Size								
Make								
Design								
Pressure								
Tread Depth	Max	Min	Max	Min	Max	Min	Max	Min
Axle 4	Outside		Inside		Inside		Outside	
Size								
Make								
Design								
Pressure								
Tread Depth	Max	Min	Max	Min	Max	Min	Max	Min
Axle 5	Outside		Inside		Inside		Outside	
Size								
Make								
Design								
Pressure								
Tread Depth	Max	Min	Max	Min	Max	Min	Max	Min

AIR BRAKE SYSTEM MEASUREMENTS

- A** = Distance from face of chamber to center of clevis pin @ full brake application
- B** = Slack Adjuster Length
- C** = Distance from center of push rod (at the face of the chamber) to the center of the cam shaft)

Enter fractions as a whole number, space, fraction

Axle 1	Left	Right	Slacks	Left	Right
Drum Diameter	16	16	Auto/Manual	AUTO	AUTO
Applied	4-1/4"	3-3/4"	A	4-1/4"	3-3/4"
Released	3-3/4"	2-5/8"	B	5-1/2"	5-3/4"
Travel	#VALUE!	#VALUE!	C	6-1/2"	6-1/2"
Size	L20	L20	Angle		
Rolling Radius	193/8"	20"			

Axle 2	Left	Right	Slacks	Left	Right
Drum Diameter	16	16	Auto/Manual	AUTO	AUTO
Applied	4-3/4"	4-3/4"	A	4-3/4"	4-3/4"
Released	2-7/8"	2-7/8"	B	6-3/16"	6"
Travel	#VALUE!	#VALUE!	C	6-3/4"	7-1/8"
Size	30R	30R	Angle		
Rolling Radius	20	20			

Axle 3	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

Axle 4	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

Axle 5	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

AIR BRAKE SYSTEM MEASUREMENTS

- A** = Distance from face of chamber to center of clevis pin @ full brake application
- B** = Slack Adjuster Length
- C** = Distance from center of push rod (at the face of the chamber) to the center of the cam shaft)

Enter fractions as a whole number, space, fraction

Axle 6	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

Axle 7	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

Axle 8	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

Axle 9	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

Axle 10	Left	Right	Slacks	Left	Right
Drum Diameter			Auto/Manual		
Applied			A		
Released			B		
Travel	0.00	0.00	C		
Size			Angle		
Rolling Radius					

ANGLE WORKSHEET

Cosine of Angle = $C^2 - A^2 - B^2 \div -2AB$

Axle 1	Left			
	A =	4.25	A ² =	18.0625
	B =	5.50	B ² =	30.25
	C =	6.50	C ² =	42.25
$C^2 - A^2 - B^2 =$		-6.0625		
$\sim -2AB =$		-46.75		
Cos of the Angle =		0.129679144		
Inverse Angle =		1.440750942		
Angle =		82.5489483		

Axle 1	Right			
	A =	3.75	A ² =	14.0625
	B =	5.75	B ² =	33.0625
	C =	6.50	C ² =	42.25
$C^2 - A^2 - B^2 =$		-4.875		
$\sim -2AB =$		-43.125		
Cos of the Angle =		0.113043478		
Inverse Angle =		1.457510693		
Angle =		83.5092113		

Axle 2	Left			
	A =	4.75	A ² =	22.5625
	B =	3.94	B ² =	15.50391
	C =	6.75	C ² =	45.5625
$C^2 - A^2 - B^2 =$		7.49609375		
$\sim -2AB =$		-37.40625		
Cos of the Angle =		-0.200396825		
Inverse Angle =		1.772559273		
Angle =		101.5601653		

Axle 2	Right			
	A =	4.75	A ² =	22.5625
	B =	6.00	B ² =	36
	C =	8.88	C ² =	78.76563
$C^2 - A^2 - B^2 =$		20.203125		
$\sim -2AB =$		-57		
Cos of the Angle =		-0.354440789		
Inverse Angle =		1.93311229		
Angle =		110.7591756		

Axle 3	Left			
	A =		A ² =	0
	B =		B ² =	0
	C =		C ² =	0
$C^2 - A^2 - B^2 =$		0		
$\sim -2AB =$		0		
Cos of the Angle =		#DIV/0!		
Inverse Angle =		#DIV/0!		
Angle =		#DIV/0!		

Axle 3	Right			
	A =		A ² =	0
	B =		B ² =	0
	C =		C ² =	0
$C^2 - A^2 - B^2 =$		0		
$\sim -2AB =$		0		
Cos of the Angle =		#DIV/0!		
Inverse Angle =		#DIV/0!		
Angle =		#DIV/0!		

Axle 4	Left			
	A =		A ² =	0
	B =		B ² =	0
	C =		C ² =	0
$C^2 - A^2 - B^2 =$		0		
$\sim -2AB =$		0		
Cos of the Angle =		#DIV/0!		
Inverse Angle =		#DIV/0!		
Angle =		#DIV/0!		

Axle 4	Right			
	A =		A ² =	0
	B =		B ² =	0
	C =		C ² =	0
$C^2 - A^2 - B^2 =$		0		
$\sim -2AB =$		0		
Cos of the Angle =		#DIV/0!		
Inverse Angle =		#DIV/0!		
Angle =		#DIV/0!		

Axle 5	Left			
	A =		A ² =	0
	B =		B ² =	0
	C =		C ² =	0
$C^2 - A^2 - B^2 =$		0		
$\sim -2AB =$		0		
Cos of the Angle =		#DIV/0!		
Inverse Angle =		#DIV/0!		
Angle =		#DIV/0!		

Axle 5	Right			
	A =		A ² =	0
	B =		B ² =	0
	C =		C ² =	0
$C^2 - A^2 - B^2 =$		0		
$\sim -2AB =$		0		
Cos of the Angle =		#DIV/0!		
Inverse Angle =		#DIV/0!		
Angle =		#DIV/0!		

ATTACHMENT LIST

1	BUS INSPECTION REPORTS (X9)
2	DRIVERS MEDICAL EXAMINATION REPORT FOR COMMERCIAL FITNESS DETERMINATION
3	
4	
5	
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